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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,895	10/09/2003	George Phillips O'Brien	MIC-35 (P50-0116)	9578
34043	7590	10/28/2004	EXAMINER	
DORITY & MANNING, PA & MICHELIN NORTH AMERICA, INC P O BOX 1449 GREENVILLE, SC 29602-1449			JULES, FRANTZ F	
			ART UNIT	PAPER NUMBER
			3617	
DATE MAILED: 10/28/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/681,895

Applicant(s)

O'BRIEN ET AL. *g*

Examiner

Frantz F. Jules

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magiala et al (US 6,278,361) in view of Kyrtos (6,072,388).

Claims 1-2, 11-12, 14, 20-21

Magiawala et al discloses an apparatus for monitoring the condition of a tire comprising at least one tire monitoring device constituted by sensors located either inside or outside of the tire as disclosed in col. 3, lines 46-49, a signal processing device for receiving and processing the tire monitoring device output signal. To monitor a balance condition of a vehicle tire, the sensor provides acceleration signals measured over a specified time duration to determine an amplitude of the Fourier component of the radial acceleration that is compared to a stored amplitude specification balance condition of the tire.

Magiawala et al teach all of the features as disclosed above but does not disclose an apparatus for monitoring the condition of a tire comprising at least one sound monitoring device outputting a signal indicating the condition of a tire to an indication device. The general concept of providing at least one sound monitoring device outputting a signal indicating the condition of a structure of a vehicle to an indication device is well known

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in the art as illustrated by Kyrtos which discloses the teaching of at least one sound monitoring device outputting a signal indicating the condition of a driveline to an indication device of a vehicle. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Magiawala et al to include the use of at least one sound monitoring device outputting a signal indicating the condition of a tire to an indication device in his advantageous apparatus for monitoring the condition of a tire as taught by Kyrtos in order to reduce error resulting from using physical observation of the tire or faulty sensors on the tire thereby reducing time and inaccuracy in the measurement.

Claims 3-9, 13, 15-18

Magiawala et al teach all of the features as disclosed above but does not disclose an apparatus for monitoring the condition of a tire comprising the step of comparing the audio signal to known harmonic frequencies or sounds made by the tire. The general concept of providing at least one sound monitoring device outputting a signal indicating the condition of a structure of a vehicle to an indication device and comparing the signal to known harmonic frequencies or sound made by the tire is well known in the art as illustrated by Kyrtos which discloses the teaching of at least one sound monitoring device outputting a signal indicating the condition of a driveline to an indication device and comparing the signal to known harmonic frequencies or sounds made by the structure of a vehicle. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Magiawala et al to include the use of at least one

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sound monitoring device outputting a signal indicating the condition of a tire to an indication device comparing the signal to known harmonic frequencies or sounds made by the tire in his advantageous apparatus for monitoring the condition of a tire as taught by Kyrtosos in order to improve the accuracy of the system thereby reducing error resulting from the recorded audio signal and inaccuracy in the measurement.

Claims 10 and 19

Regarding using a sound monitoring device in each of the four tires as recited in claims 10 and 19, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Magiawala et al et al to include the use of a sound monitoring device in each of the four tires in his advantageous system, as the duplication/reduction of identical parts which perform essentially the same function is a common occurrence throughout the switch box for railway design arts, and the specific number of blades used on a saddle would have been an obvious duplication of parts, depending upon such common factors as the harmonic frequency of the tires, the yield strength of the tire material, the condition of the road; the ordinarily skilled artisan choosing the best stress profile which would most optimize the cost and performance of the device for a particular application at hand, based upon the above noted common design criteria.

### ***Response to Arguments***

3. Applicant's arguments filed 09/02/2004 have been fully considered but they are moot in view of the new grounds of rejection

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Aplicant's argument that Kyrtos fails to disclose a sound monitoring apparatus applied to a tire is valid and forces the withdrawal of the previous anticipation rejection made in the previous office action. The disclosure of a sound monitoring device applied to a structure of a vehicle disclosed by Kyrtos, however, establishes a prima facie case of obviousness to one of ordinary skill in the art.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules

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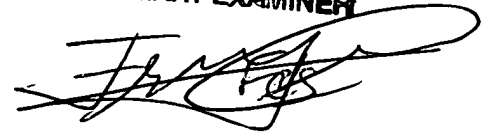
Primary Examiner

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FFJ

October 26, 2004

**FRANTZ F JULES**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Frantz F. Jules', written over the printed name and title.